(Adopted January 19, 2001)

RULE 1132 FURTHER CONTROL OF VOC EMISSIONS FROM HIGH-EMITTING SPRAY BOOTH FACILITIES

(a) Purpose and Applicability

The purpose of this rule is to further reduce volatile organic compound (VOC) emissions from spray coating or laminating operations in high VOC-emitting facilities. This rule applies to any spray booth facility, except petroleum industry facilities, that uses VOC-containing materials that amount to more than 40,000 pounds (20 tons) per year of VOC emissions in any emission inventory year beginning in 1999. Except when a specific exemption applies, the facilities subject to this rule shall continue to comply with other rules that are applicable to the same operation.

(b) Definitions

For the purpose of this rule, the following definitions shall apply:

(1) CAPTURE SYSTEM is an arrangement of devices such as enclosures, plenums, fans and ductworks used to collect VOC-laden air from the process area and direct it to the control equipment.

(2) COMPOSITE MANUFACTURING FACILITY is any facility engaged in the manufacturing of products using composites, which are a combination of reinforcement fibers in a thermosetting polymer resin matrix where the reinforcement fibers are chemically bonded to the resin matrix.

(3) EMISSION CONTROL SYSTEM is a combination of capture system(s) and control equipment used to reduce, eliminate or control the release of VOC to the atmosphere.

(4) EMISSION INVENTORY YEAR is the annual emission reporting period beginning from July 1 of the previous year through June 30 of a given year. For example, emission inventory year 1999 covers the period from July 1, 1998 through June 30, 1999.

(5) EXCESS EMISSION REDUCTIONS are VOC emission reductions that are not required by any other District requirement as of January 19, 2001. Excess emission reductions also include any reductions achieved on or after January 19, 2001 in excess of the requirements of subdivision (c) resulting from a process change subject to best available control

technology (BACT) as specified in Regulation XIII and implemented solely for the purpose of complying with this rule.

(6) FACILITY is any equipment or group of equipment or other VOC-emitting activities, which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above-described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one facility.

(7) GEL COAT is a thermosetting resin surface coating, either pigmented or clear, that provides a cosmetic enhancement and improves resistance to degradation from exposure to the elements.

(8) NONATOMIZED APPLICATION is any resin application technology in which the resin is not broken into droplets or an aerosol as it travels from the application equipment to the surface of an object. Nonatomized application technology includes, but is not limited to, flowcoaters, flow choppers, pressure-fed rollers, resin impregnators, and hand applications using a brush or roller.

(9) PETROLEUM INDUSTRY FACILITY is any facility primarily engaged in the production, refining, storage, transfer or distribution of crude petroleum or petroleum products as defined in the Standard Industrial Classification for crude petroleum and natural gas (SIC code 1311), petroleum refining (SIC code 2911), petroleum bulk stations and terminals (SIC code 5171), or other related industries (e.g., SIC codes 4226, 4612, 4613, 4923 and 5541).

(10) RESIN is any thermosetting resin used to encapsulate and bind together reinforcement fibers in the manufacturing of composites.

(11) SPRAY BOOTH is any equipment or enclosure used to capture or reduce overspray from the application of any coating, lamination, or other VOC-containing materials, that requires a permit from the District. A spray booth includes standard bench type, floor type, and automotive type spray booths, as well as prep stations, spray stations (i.e., a bank of filters with a plenum and exhaust fan), and spray rooms.

(12) SPRAY BOOTH FACILITY is any facility that has installed one or more spray booths. A facility subject to a District rule or regulation that

requires installation of any spray booth is also considered as a spray booth facility.

(13) VOC-CONTAINING MATERIAL is any material that contains VOC including, but not limited to, resins, polymers, gel coats, coatings, paints, varnishes, stains, sealers, thinners, cleanup solvents, thinning solvents, inks, fountain solutions, adhesives, and sealants. VOC-containing materials do not include fuels or combustion products.

(14) VOLATILE ORGANIC COMPOUNDS (VOC) are as defined in Rule 102.

(c) Requirements

On or after the effective date specified in paragraph (e)(1), a person shall not operate any spray booth facility subject to this rule, unless the VOC emissions from any equipment, activity or operation that applies, or is required by any District rule, regulation or permit to apply, VOC-containing materials in a spray booth are reduced through the use of the following:

(1) An emission control system that has an overall efficiency of at least 65 percent by weight;

(2) VOC-containing materials that have a VOC content at least 65 percent lower than any applicable rule limit in effect as of January 19, 2001; or

(3) A combination of methods specified in paragraphs (c)(1) and (c)(2), which when individually applied do not meet the specified reduction requirement, but when combined reduce the VOC emissions by at least 65 percent by weight.

(d) Alternative Compliance Plan

In lieu of complying with the requirements of subdivision (c) and the effective dates specified in paragraph (e)(1), the operator of a spray booth facility may comply with an alternative compliance plan that is submitted to and approved by the Executive Officer. The Executive Officer shall not approve an alternative compliance plan, unless the plan has demonstrated real, quantifiable and verifiable excess emission reductions through one of the following:

(1) Any combination of facility-wide measures at a composite manufacturing facility that reduces VOC emissions by at least 65 percent effective July 1, 2004, from what would be emitted based on other applicable rule requirements in effect as of January 19, 2001. In addition, effective

January 1, 2002, the composite manufacturing facility shall comply with all of the following:

(A) Nonatomized application shall be used for all resin applications;

(B) Clear gel coat shall contain no more than 44 percent by weight of monomers, as applied;

(C) White and off-white pigmented gel coat shall contain no more than 30 percent by weight of monomers, as applied; and

(D) Non-white pigmented gel coat shall contain no more than 37 percent by weight of monomers, as applied.

(2) Effective December 31, 2004, use of VOC-containing materials that have a VOC content at least 85 percent lower than any applicable rule limit in effect as of January 19, 2001, emission control systems that have an overall efficiency at least 85 percent by weight, or a combination thereof that achieves an overall reduction of 85% by weight, for each spray booth except those qualified for exemption as specified in paragraphs (h)(2) and (h)(3); or

(3) Any combination of facility-wide measures that reduces VOC emissions equivalent to a minimum of 10 percent more than that required under subdivision (c) on or before the effective date specified in paragraph (e)(1).

The Executive Officer shall impose conditions necessary to ensure continuous compliance. In no event shall the compliance determination period exceed a monthly basis.

(e) Compliance Schedule

(1) The effective dates of the requirements in subdivision (c) shall be as follows:

(A) July 1, 2003, for spray booth facilities emitting more than 100,000 pounds (50 tons) of VOC in emission inventory year 1999 or 2000.

(B) July 1, 2004, for spray booth facilities emitting up to and including 100,000 pounds (50 tons) of VOC in emission inventory year 1999 or 2000.

(C) For all other spray booth facilities, July 1, 2004, or 30 months after the applicable VOC emissions from the facility have exceeded 40,000 pounds (20 tons) for an emission inventory year after 2000, whichever is later.

(2) No later than 18 months prior to the applicable compliance date pursuant to paragraph (e)(1), the operator of a facility subject to this rule shall submit to the Executive Officer:

(A) Complete application(s) for permit(s) to construct and operate for any modifications or new installations required to comply with this rule and for which the permit(s) is (are) required pursuant to Rules 201 and 203;

(B) A change of condition application for each spray booth employing the compliance method pursuant to paragraph (c)(2) or (c)(3) by switching to lower VOC content materials; and

(C) A complete plan application in accordance with Rule 306 – Plan Fees, including a description of how compliance is to be achieved, if the operator elects to comply with the alternative compliance plan pursuant to subdivision (d). Notwithstanding the above, all plans for alternative compliance options specified in paragraph (d)(1) or (d)(2) shall be filed no later than January 1, 2002, and all necessary permit applications shall be filed no later than 18 months prior to the applicable final compliance date.

(f) Test Methods and Procedures

The following test methods and procedures shall be used to determine compliance with this rule. All test methods referenced below shall be the most recent version issued by the respective organization. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

(1) Determination of VOC Content of VOC-Containing Materials:

(A) US EPA Method 24 - Determination of volatile matter content, water content, density, volume solids and weight solids of surface coatings

(B) US EPA Method 24A - Determination of volatile matter content and density of printing inks and related coatings

(C) District Method 303 - Determination of Exempt Compounds

(D) District Method 304 - Determination of Volatile Organic Compounds (VOCs) in Various Materials

(E) District Method 313 – Determination of Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry

(2) Determination of Efficiency of Emission Control Systems:

(A) The capture efficiency of an emission control system shall be determined by verifying the use of a Permanent Total Enclosure (PTE) and 100% capture efficiency as defined by US EPA Method 204, "Criteria for and Verification of a Permanent or Temporary Total Enclosure." Alternatively, if a US EPA Method 204 defined PTE is not employed, capture efficiency shall be determined using a minimum of three sampling runs subject to data quality criteria presented in the US EPA technical guidance document "Guidelines for Determining Capture Efficiency, January 9, 1995." Individual capture efficiency test runs subject to the US EPA technical guidelines shall be determined by:

(i) The Temporary Total Enclosure (TTE) approach of US EPA Methods 204 through 204F; or

(ii) The District "Protocol for Determination of Volatile Organic Compounds (VOC) Capture Efficiency."

(B) The control equipment efficiency of an emission control system, on a mass emissions basis, and the VOC concentrations in the exhaust gases, measured and calculated as carbon, shall be determined by US EPA Test Methods 25, 25A, District Method 25.1 - Determination of Total Gaseous Non-Methane Organic Emissions as Carbon, or District Method 25.3 – Determination of Low Concentration Non-Methane Non-Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable. US EPA Test Method 18, or ARB Method 422 shall be used to determine emissions of exempt compounds.

(C) The overall efficiency of an emission control system shall be determined using the following equation (all efficiencies expressed in percent):

Overall Efficiency =

(Capture Efficiency) x (Control Equipment Efficiency)/100

(3) Multiple Test Methods

When more than one test method or set of test methods are specified for any testing, the application of these methods to a specific set of test conditions is subject to approval by the Executive Officer. In addition, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.

(4) Laboratory Approval

The sampling, analysis, and reporting shall be conducted by a laboratory that has been approved under the District Laboratory Approval Program (LAP) for the cited District reference test methods, where LAP approval is available. For District reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available for that District reference test method.

(g) Monitoring, Recordkeeping and Reporting Requirements

(1) No later than 180 days after the effective date of the requirements, the operator of a facility who elects to install an emission control system to comply with all or part of the rule requirements shall conduct performance testing to determine the overall efficiency of the emission control system and submit a complete test report to the Executive Officer. The performance testing of the emission control system shall be repeated when the system is modified or an operating parameter is changed in a manner that affects the capture or control efficiency. In such case, the affected capture or control efficiency testing shall be conducted and the test report submitted to the Executive Officer within 180 days after the modification. The Executive Officer may require more frequent performance testing, as necessary.

(2) The operator of a facility subject to this rule shall submit an initial compliance certification report to the Executive Officer no later than 180 days after the effective date of the requirements. The operator shall then submit subsequent compliance certification reports annually within 60 days after the end of each emission inventory year. The initial and annual compliance certification reports shall include the performance testing report (if applicable), inventory of materials used, and other procedures

and information, as necessary to determine compliance with the applicable requirements or exemptions.

(3) The operator shall, at a minimum, maintain the following records for a period of at least two years, or five years for facilities subject to Title V Permit requirements, and make the records available to the Executive Officer upon request:

(A) Purchase records, or equivalent records as approved by the Executive Officer, for all VOC-containing materials used in the facility;

(B) Records of VOC-containing materials in accordance with Rule 109 – Recordkeeping for Volatile Organic Compound Emissions;

(C) Records on the system operating and maintenance parameters as applicable with any emission control system. At a minimum, the operator shall maintain records of the parameters necessary to demonstrate continuous operation and compliance of the emission control system during periods of emission producing activities. These parameters shall include, but are not limited to, temperatures, pressures, and flow rates; and

(D) All measurements, process information, material data, test data, and other related information used in or required to support the emission determinations for compliance demonstration.

(h) Exemptions

The requirements of subdivision (c) shall not apply to the following:

(1) A facility that has applied for and been issued by the Executive Officer an enforceable permit condition that limits the facility-wide VOC emissions from the use of VOC-containing materials to no more than 40,000 pounds (20 tons) per emission inventory year. The operator must submit complete application(s) for change of permit conditions no later than 18 months prior to the applicable compliance date pursuant to paragraph (e)(1) and comply with the facility-wide emissions limit beginning on the applicable effective date pursuant to paragraph (e)(1).

(2) A spray booth that meets the following condition:

Exhaust Flow Rate (standard cubic feet per minute)	Allowable VOC Emissions (pounds per day)
Less than 10,000	12
10,000 or greater but less than 30,000	25
30,000 or greater but less than 60,000	50
60,000 or greater but less than 90,000	100
90,000 or greater but less than 275,000	150
275,000 or greater	225

If at any time the exhaust flow rate falls in a lesser category, except during equipment malfunction, maintenance or repairs for a period not to exceed 72 hours per occurrence, the allowable VOC emissions of that lesser category shall apply. The allowable VOC emissions shall be determined based on the monthly average of the past calendar month.

(3) A spray booth for which the VOC emissions are reduced through the use of an existing emission control system in operation under a valid District permit as of December 1, 2000, that is not mandatory pursuant to any other District requirement or the requirement of any other governmental agency. This exemption is valid only for facilities that are subject to the alternative compliance plan specified in paragraph (d)(2).